

June 24, 2015

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MANAGEMENT | TRAINING | LAB SERVICES

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Subject: Visual Clearance Inspection Report Paint Removal for IPWP1

Site Address: 3100 Airport Way S

Seattle WA

NVL Project #: 2012-494

Dear Mr. Mizrahi:

I. <u>Introduction</u>

NVL Laboratories has prepared this report per the overall Work Plan, the *Visual Inspection Plan to Evaluate Work Performance* (Exhibit 12 to IPWP1) and the *Example of Method to Randomly Select Two Percent Surface Area to Test* (Exhibit 13 to IPWP1). This report confirms that through a combination of general inspections, detailed two percent inspections and follow-up punchlist inspections final clearance approval for all of the Phase I Work was achieved.

Executive Summary / Final Visual Clearance Inspection Results

Final visual clearance inspection of the Phase 1 Work areas, including the west elevation of building 10, the west elevation of building 11, and all four elevations of building 13, conducted on December 10, 2014, confirmed the physical removal of the paint consistent with the Work Plan and the IPWP for Phase 1. Substrate sampling further confirms the efficacy of the Work. Paint removal in excess of 99 percent resulted in PCB remedial waste concentrations at or below the most conservative regulatory limits set for high occupancy areas, even on these low occupancy area walls. Most substrate samples were non-detect for PCBs following final clearance work (substrate sampling data provided in separate report).

Project Background and Visual Inspection Summary

NVL Laboratories prepared the Visual Inspection Plan to Evaluate Work Performance ("Inspection Plan") dated February 7, 2014, to document planned procedures to ensure that paint is removed at the completion of each individual phase of Work as outlined in the Rainier Commons Work Plan dated March 25, 2013, revised July 25, 2013 ("Work" or "Plan"), and meets the requirements of the EPA risk based approval for the Plan.



Initial staging and set up work to remove PCB containing paint from the exterior of Phase 1 surfaces commenced on June 5, 2014, by CGI, Inc. (Contractor), pursuant to the EPA approved Individual Phased Work Plan 1 (IPWP1).

As described in the Inspection Plan, the Contractor provided notification to Rainier Commons at certain points during the project that paint removal on specified walls was complete and ready for inspection. Upon these notifications, Rainier Commons requested NVL to perform the inspections which included visually examining 100 percent of the surfaces from which paint was removed and then conducting detailed verification analysis of a minimum of 2 percent of the substrate, pursuant to the random selection methodology outlined in Exhibit 13 to the IPWP1.

It was determined as a result of the first inspections that much of the paint had been removed, but that complete removal of the visible paint had not yet been accomplished. Thus, additional remediation was necessary. In response to this finding, Rainier Commons had the Contractor perform additional detailed work, which included using grinders and other hand tools to remove remaining paint. This effort in particular was to address and adhere to the requirements in Condition 7 of the Work Plan approval.

Compliance inspections to confirm the status of paint removal were carried out by NVL, in addition to Rainier Commons' inspections and EPA site visit inspections, at a minimum, on the following dates:

July 24, 2014 July 29, 2014 through July 31, 2014 August 4, 2014 September 12, 2014 October 9, 2014 October 13, 2014 October 17, 2014

December 1, 2014 December 10, 2014

An initial general inspection of building 13 was conducted on July 24, 2014. The Contractor was instructed to perform additional work. A second general inspection and detailed 2 percent inspections were conducted between July 29, 2014 and July 31, 2014. A follow-up inspection on the randomly selected grid areas that did not pass the first detailed inspection was conducted on August 4, 2014 and those areas of building 13 were cleared at that time, as reported below. Additional general inspections and detailed two percent visual clearance inspections of Building 10 and 11 were performed on September 12, 2014. The areas within the randomly selected grids for buildings 10 and 11 were cleared at that time, as reported below. However, other areas identified in general inspections as punchlist items, or areas of interest, continued to receive additional remedial Work. A series of small portable containments were used in connection with a number of these areas. General progress inspections on punchlist areas were conducted in October. A final inspection was called for at the end of November. A final punchlist of seven locations of interest on building 13 and 3 locations of interest on building 10 and 11 was developed on December 1, 2014 and all buildings passed final inspection December 10, 2014.



The paint removal Work was conducted pursuant to the IPWP1 between June 5, 2014 and December 10, 2014. The abrasive blasting work in total blasting days was less than four weeks. The remaining time involved extensive, detailed hand work which occupied an additional 16 weeks.

II. Objectives and Methodology

Clearance Requirements

The requirements for visual clearance included:

- Requirement 1: EPA requires complete removal of all visible paint to satisfy the requirements of this approval.*
- Requirement 2: If paint remains after blasting is conducted additional remediation is necessary to meet the terms of this approval.
- Requirement 4: EPA requires the use of a numbered grid and a random number selector for this process.
- Requirement 5: The proposed grid, inspection locations and inspection methodology shall be included in each IPWP for EPA approval.

Visual Clearance

NVL conducted a general inspection of 100 percent of the Phase I work areas visually sweeping each section of the wall inspected side to side and up and down. Any areas requiring additional work were noted and brought to the Contractor's attention.

During the additional detailed 2 percent visual clearance inspections, NVL performed the following tasks:

- 1) Established separate grid system for the elevations under inspection;
- 2) Used a random number generator to randomly select grid squares for inspection;
- 3) Physically marked off the randomly selected grid squares on the building surfaces; and
- 4) Inspected the grid areas and took photos to document the condition of the building surfaces within the grid squares.

Any areas requiring additional work were noted and brought to the Contractor's attention.

^{*} NVL concludes that more than 99 percent of the paint was removed and no visible paint remained per the Work Plan and the EPA approval. The only exception included in the no visible paint standard was the occasional minute fleck of paint observable upon very close inspection in inaccessible recessed pits or cracks of the substrate. Removal of these minute flecks would have required hundreds of additional man hours with a dental pick or similar style of hand tool, which is impracticable and not warranted on the risk based approval, given the very favorable substrate sampling results.



III. <u>Visual Inspections Performed July 24th and 29th-31st 2014 Resulted in Punchlist to Contractor Requiring Additional Work</u>

As referenced above, NVL performed visual compliance inspections at several intervals during the course of the Phase 1 Work. The initial inspections conducted on July 24, 2014 did not pass and additional work was required. A detailed two percent inspection was not performed at that time and was deferred until the Contractor had performed additional required work. The next inspections were conducted on building 13, inside the containment, between July 29, 2014 and July 31, 2014 as itemized below¹.

Methodology and Findings Initial Detailed Inspection July 29-31:

North Elevation Building 13

Random Number Grid Selection for North Elevation:

Random grid numbers were selected for inspection. Numbers that fell in grid squares without homogenous substrates were skipped (highlighted in red) (see figure below). Numbers that fell in grid squares with acceptable grid substrate that were subsequently inspected are highlighted in green. A total of 10 grid squares were selected that together composed 2 percent of the elevation surface. Un-utilized grid squares are left in white.

Б ! "	TB 1
Random #	Random
Count	Grid #
1	107
3	133
3	57
4	82
5	450
6	227
7	280
8	334
9	481
10	328
11	53
12	370
13	406
14	231
15	168
16	152
17	306
18	420

¹ Other punchlist items, in addition to the randomly selected 2 percent grid squares itemized here were also identified by NVL, Rainier Commons and EPA and were subject to additional work on the part of the Contractor and to follow up inspections, but were outside of and in addition to the detailed 2 percent inspection areas itemized here. All punchlist work was addressed by the Contractor prior to final inspection and clearance, December 10, 2014, as set forth below.

Rainier Commons Visual Clearance Inspection Report IPWP1 NVL Project #:2012-494

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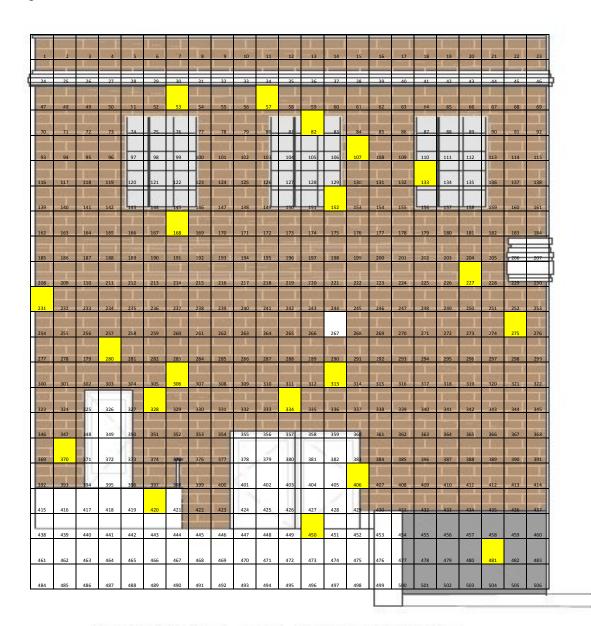


19	313
20	275



Grid Overlay- North Elevation Building 13

The drawing below shows the orientation of the grid square overlay for the north elevation. Grid squares randomly selected for sampling are highlighted in yellow. The underlying drawing is not to scale



NORTH ELEVATION BUILDING 13



North Elevation Building 13 Grid Square Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
Count #	133		No
3	57		No
6	227		Yes- Red paint in mortar
7	280		No
8	334	1 8	No



North Elevation Grid Square Evaluation Table, Continued

Random Count #	Grid #	Photo	Paint Still Present?
9	428		No
10	381		No
11	53		No
14	231		No
19	313		No



West Elevation Building 13

Random Number Grid Selection for West Elevation:

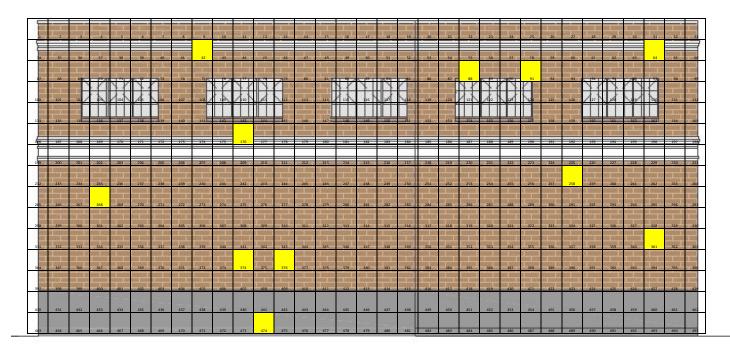
Random grid numbers were selected for inspection. Numbers that fell in grid squares without brick or concrete substrate were skipped (highlighted in red). Numbers that fell in grid squares with acceptable grid substrate that were subsequently inspected are highlighted in green. A total of 10 grid squares were selected that together composed 2 percent of the elevation surface. Un-utilized grid squares are left in white.

Random #	Random
Count	Grid #
1	313
2	474
2 3 4	361
4	42
5	88
6	91
7	374
8	268
9	64
10	376
11	176
12	258
13	304
14	215
15	372
16	444
17	178
18	290
19	145
20	240
1	313



Grid Overlay- West Elevation Building 13

The drawing below shows the orientation of the grid square overlay for the west elevation. Grid squares randomly selected for sampling are highlighted in yellow. The underlying elevation drawing is not to scale.



WEST ELEVATION BUILDING 13



West Elevation Building 13 Grid Square Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
1	313		No
2	474		YES- Red paint on concrete near bottom of grid square.
3	361		YES- Red paint on concrete near bottom of grid square.
4	42		No
7	374		No



West Elevation Building 13 Grid Square Evaluation Table, Continued

Random Count #	Grid #	Photo	Paint Still Present?
8	268		No
9	64		No
10	376		No
11	176		No
12	258		No



South Elevation Building 13

Random Number Grid Selection for the South Elevation:

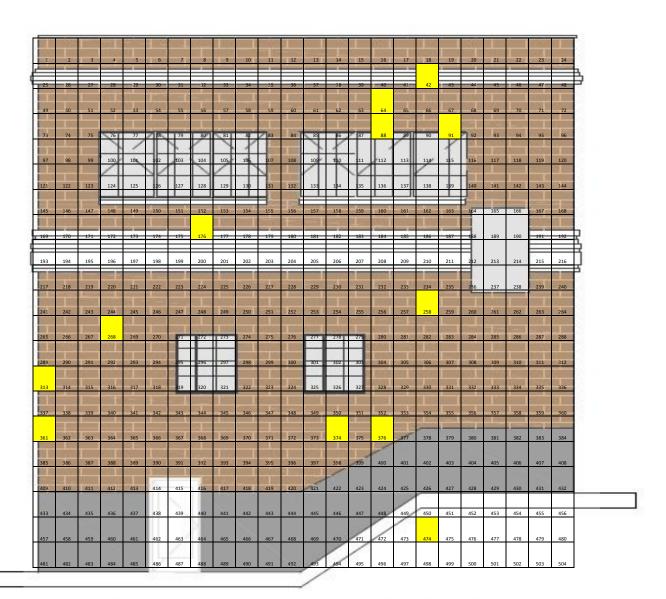
Random grid numbers were selected for inspection. Numbers that fell in grid squares without brick or concrete substrate were skipped (highlighted in red). Numbers that fell in grid squares with acceptable grid substrate that were subsequently inspected are highlighted in green. A total of 10 grid squares were selected that together composed 2 percent of the elevation surface. Un-utilized grid squares are left in white.

Random #	Random
Count	Grid #
1	313
2	474
3	361
4	42
5	88
6	91
7	374
8	268
9	64
10	376
11	176
12	258
13	304
14	215
15	372
16	444
17	178
18	290
19	145
20	240
1	313



Grid Overlay- South Elevation Building 13

The drawing below shows the orientation of the grid square overlay for the South elevation. Grid squares randomly selected for sampling are highlighted in yellow. The underlying elevation drawing is not to scale.



SOUTH ELEVATION BUILDING 13



South Elevation Building 13 Grid Square Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
1	313		No
3	361		No
4	42		No
6	91		YES- red paint on wood 2x3 to left of grid square.
7	374		No



South Elevation Building 13 Grid Square Evaluation Table, Continued

Random Count #	Grid#	Photo	Paint Still Present?
8	268		No
9	64		No
10	376		No
11	176		No
12	258		No



East Elevation Building 13

Random Number Grid Selection for the East Elevation:

Random grid numbers were selected for inspection. Numbers that fell in grid squares without brick or concrete substrates were skipped (highlighted in red). Numbers that fell in grid squares with acceptable grid substrate that were subsequently inspected are highlighted in green. A total of 10 grid squares were selected that together composed 2 percent of the elevation surface. Un-utilized grid squares are left in white.

Random #	Random
Count	Grid #
1	312
2 3	395
3	136
4	13
5	295
6	492
7	393
8	416
9	69
10	445
11	8
12	98
13	443
14	423
15	468
16	449
17	347
18	389
19	375
20	343
1	312



Grid Overlay- East Elevation Building 13

The drawing below shows the orientation of the grid square overlay for the East elevation. Grid squares randomly selected for sampling are highlighted in yellow. The underlying elevation drawing is not to scale.



EAST ELEVATION BUILDING 13



East Elevation Building13 Grid Square Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
1	312		No
2	395		No
4	13		No
5	295		No
6	492		Yes- Red paint on concrete at the bottom of the grid square.



East Elevation Building 13 Grid Square Evaluation Table, Continued

Random Count #	Grid #	Photo	Paint Still Present?
7	393		No
9	69		No
11	8		No
13	443		Yes- Red paint on and behind metal drain pipe.
15	468		No



Conclusion From July 29-31 Detailed Inspections

The overwhelming majority of wall surface area inspected passed the visual compliance inspection. However, visible paint was identified in six grid square locations examined that did not meet requirement 1 of Condition 7 of EPA's approval for IPWP1:

- 1. North elevation, random count number six, grid number 227
- 2. West elevation, random count number two, grid number 474.
- 3. West elevation, random count number three, grid number 361.
- 4. South elevation, random count number six, grid number 91.
- 5. East elevation, random count number six, grid number 492.
- 6. East elevation, random count number 13, grid number 443.

Requirement 2 of Condition 7 of EPA's approval for IPWP1 states "If paint remains after blasting is conducted additional remediation is necessary to meet the terms of this approval." The Contractor was advised and additional remediation was carried out to satisfy the requirements of the Work.

IV. August 4, 2014 Follow-up Inspection Building 13 - Six Grid Areas

A follow-up clearance inspection, of the six grid areas itemized above, was performed on August 4, 2014, by Marcus Gladden, and Munaf Khan, following additional remediation efforts to remove residual paint that was identified during the July 29th through 31st inspections.

Executive Summary

Based on the findings of the August 4, 2014 follow-up inspection, no additional paint removal is necessary to meet Condition 7 of EPA's approval for the Work Plan in the areas called out during NVL's July 29-31 inspections.

Building 13 Follow-up Visual Clearance

North Elevation Grid Square #227 Follow-up Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
6	227		No



West Elevation Grid Square #474 and #361 Follow-up Evaluation Table

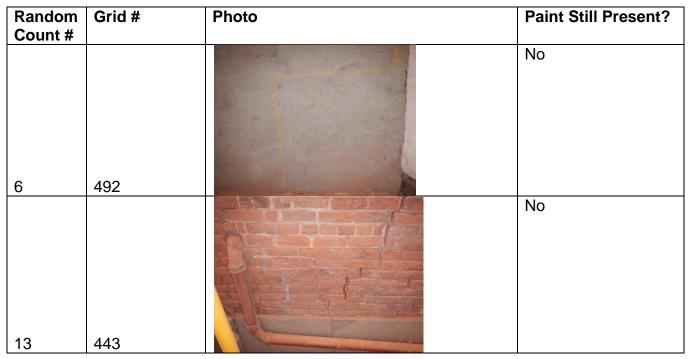
Random Count #	Grid #	Photo	Paint Still Present?
2	474		No
3	361		No

South Elevation Grid Square #91 Follow-up Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
6	91		No



East Elevation Grid Square #492 and 443 Follow-up Evaluation Table



Conclusion

At the time of the August 4th, 2014 clearance investigation, the four elevations of building 13 were found to meet requirement 1 of Condition 7 of EPA's approval for IPWP1 that no visible paint remains on the randomly selected 2 percent of surface area.

V. <u>Detailed Random Grid Two Percent Inspection Buildings 10 and 11</u>

The detailed two percent clearance inspection, for buildings 10 and 11 was performed inside the containment, on September 12th, 2014, by Marcus Gladden, an Industrial Hygienist with NVL Labs and Munaf Khan, a Senior Industrial Hygienist and Project Manager with NVL Labs.

Executive Summary

Based on the findings of the visual clearance inspection, no additional paint removal is necessary to meet the requirement 1 Condition 7 of EPA's approval for the Work Plan, in the random grid locations inspected.



Findings

Building 10 West Elevation

Random Number Grid Selection for the Building 10 West Elevation:

Random grid numbers were selected for inspection. Numbers that fell in grid squares without homogenous substrates were skipped (highlighted in red). Numbers that fell in grid squares with acceptable grid substrate that were subsequently inspected are highlighted in green. A total of 10 grid squares were selected that together composed two percent of the elevation surface. Un-utilized grid squares are left in white.

Random #	Random
Count	Grid #
1	298
3	370
3	409
4	377
5	15
6	374
7	336
8	416
9	415
10	80
11	126
12	385
13	281
14	225
15	115
16	182
17	24
18	183
19	175
20	56



Grid Overlay- Building 10 West Elevation

The drawing below shows the orientation of the grid square overlay for the north elevation. Grid squares randomly selected for sampling are highlighted in yellow and red. The underlying elevation drawing is not to scale.

1		2	3	4	5	6	7			10	п	12	13	14	- 11
2	16	37	18	19	20	21	22	23	24	25	26	27	28	29	36
3	31	12	33	34	35	36	37	33	39	40	41	42	43	44	41
4	46	47	45	49	50	51	52	53	54	55	56	57	58	59	60
5	61	62	63	G4	65	66	67	ca	69	70	71	72	73	74	7
6								LINE II				-			
7	76	92	93	79	95	95	97	98	14	100	101	102	103	200	30
3	100	307	308	106	110	111	112	111	ne ne		116	117	118	119	12
)	1 G 10 G	14		10000		111		EVVS			13.0	810.753	50,000	1000	
10	121	172	123	124	125		127	126	129	130	134	132	153	134	13
11	136	137	138	139	140	141	142	10	344	145	146	147	141	143	15
12	151	157	153	154	155	156	157	158	228	160	161	162	163	354	36
13	166	367	153	169	130	171	172	173	374	175	176	177	178	179	33
14	181	382	183	384	185	106	187	188	189	190	191	192	193	254	. 29
15	196	197	198	199	200	201	202	203	204	205	206	307	208	209	21
16	211	212	713	716	215	216	217	218	219	320	221	222	223	224	22
17	226	227	228	229	230	231	232	233	234	235	236	237	238	239	24
18	241	242	243	244	245	246	247	248	249	250	251	252	253	254	25
19	256	257	258	259	260	261	262	263	264	265	266	267	268	209	27
20	271	272	271	274	275	276	277	278	279	280	201	202	283	254	28
21	296	287	218	289	290	291	292	293	294	295	296	297	298	299	30
22	301	300	303	304	305	306	307	301	309	210	211	312	313	334	31
23	316	317	118	319	320	321	322	323	324	325	336	327	328	329	33
24	331	332	111	226	335	100	337	338	239	340	341	342	343	344	34
******	346	347	348	349	350	351	357	353	354	355	356	357	258	359	36
25 26	361	362	363	164	365	365	367	368	309	370	371	372	373	374	37
33.55	376	377	178	379	380	361	362	341	284	385	386	367	388	389	29
27	391	292	193	194	395	396	397	398	399	400	401	A02	601	404	40
28	406	407	408	409	410	411	412	413	414	415	416	417	418	433	43
29	421	422	423	424	425	426	427	425	429	430	431	412	411	434	:41
30	436	437	cu	439	440	441	442	443	444	445	446	447	663	449	45
31	451	452	453	454	455	456	857	458	459	460	461	862	463	454	45
32	466	457	468	409	470	471	472	473	474	475	476	477	478	479	43
33	461	462	481	484	485	495	467	411	489	490	491	492	491	494	49



Building 10 West Elevation Grid Square Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
Count #	370		No ²
10	80		No
14	225		No
13	281		No
1	298		No

² Metal cap flashing remediated and disposed of separately from brick work.



Building 10 West Elevation Grid Square Evaluation Table, Continued

Random Count #	Grid #	Photo	Paint Still Present?
3	409		No
12	385		No
6	374		No
4	377		No
8	416		No



Building 11 West Elevation

Random Number Grid Selection for Building 11 West Elevation:

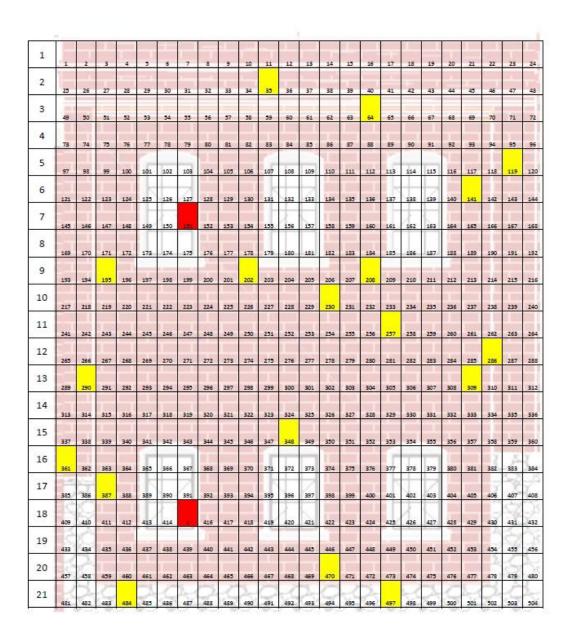
Random grid numbers were selected for inspection. Numbers that fell in grid squares without brick or masonry substrate were skipped (highlighted in red). Numbers that fell in grid squares with acceptable grid substrate that were subsequently inspected are highlighted in green. A total of 10 grid squares were selected that together composed two percent of the elevation surface. Un-utilized grid squares are left in white.

Random #	Random
Count	Grid #
1	286
3	290
3	361
4	470
5	151
6	64
7	35
8	497
9	119
10	195
11	257
12	387
13	141
14	348
15	309
16	484
17	230
18	208
19	202
20	415



Grid Overlay- Building 11 West Elevation

The drawing below shows the orientation of the grid square overlay for the west elevation. Grid squares randomly selected for sampling are highlighted in yellow. The underlying elevation drawing is not to scale.





Building 11 West Elevation Grid Square Evaluation Table

Random Count #	Grid #	Photo	Paint Still Present?
7	35		No
6	64		No
9	119	Date 11	No
13	141		No
11	257		No



Building 11 West Elevation Grid Square Evaluation Table, Continued

Random Count #	Grid #	Photo	Paint Still Present?
10	195		No
1	286		No
2	290		No
3	361		No
4	470		No



Conclusion

At the time of the September 12th, 2014 clearance investigation, the areas randomly included in the detailed 2 percent inspections on the west elevations of buildings 10 and 11 were found to meet requirement 1 of Condition 7 of EPA's approval for IPWP1 that no visible paint remains on the randomly selected two percent of surface area.

VI. <u>Inspection Resulting in Final Punchlist December 1, 2014</u>

NVL identified 7 locations on building 13 where paint was still visibly present on the brick/concrete. These locations were marked and documented. NVL also identified 3 areas on the west elevation of buildings 10 and 11 where paint was present. These locations were marked and documented as well.



1. area of interest 1- bldg 13 north elevation NW corner



2. area of interest 2- bldg 13 west elevation NW corner





3. area of interest 3- bldg 13 south elevation SE



4. area of interest 4- bldg 13 south elevation SE



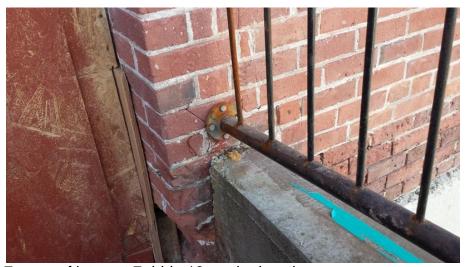
5. area of interest 5- bldg 13 North elevation

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6. area of interest 6- bldg 13 north elevation



7. area of interest 7- bldg 13 north elevation



8. area of interest 8- bldg 11 west elevation

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9. area of interest 9- bldg 11 west elevation



10. area of interest 10- bldg 11 west elevation

VII. Final Clearance Inspection Following all Punchlist Work December 10, 2014

Final inspection of all Work areas was performed December 10, 2014, including the last 10 areas of interest identified during the December 1, 2014 inspection. Final clearance and approval of the Phase I Work was made at that time.



Conclusion Following December 10, 2014 Final Clearance Inspection

NVL found no visible paint remaining in any area inspected. No visible paint means standing and looking at the building at close range. The exception, within this no visible paint standard, was the observation of the occasional minute fleck of paint recessed into pits or cracks in the substrate, which were only observable at very close range. These exceptions were few and would have required hand removal with a dental pick or similar hand tool. Substrate sampling confirms that removal of more than 99 percent of the paint (no visible paint) results in PCB remedial waste at most, at 1.6 ppm in a single location (east wall building 13, concrete substrate), 1.1 ppm, the next highest result in one location (west wall building 11 sandstone substrate) and in all other locations (four additional concrete substrate samples) non-detect for PCBs³.



Building 13 North Elevation



Building 13 East Elevation

³ Lab results for samples previously submitted with Phase II IPWP.





Building 13 South Elevation



Building 13 West Elevation





Building 11 West Elevation



Building 10 West Elevation



Closing

This document is the sole property of NVL Laboratories and Rainier Commons, the building owner.

NVL appreciates the opportunity to provide the inspection service to Rainier Commons and trust this report documenting the assessment and results meets your needs as requested. Please contact NVL if information is needed at any time regarding the information provided in this report.

Sincerely,

Sample Collection & Documentation:

Marcus Gladden
Environmental Quality Technician
NVL Laboratories

Munaf Khan Project Manager

Laboratory Director / President

Review & Project Management:

Inspection Oversight / Certified Industrial Hygienist:

David Leonard MSPH, CIH

Certified Industrial Hygienist Technical Resource Expert

REFERENCED:

- Individual Phased Work Plan 1 (IPWP1)
- Visual Inspection Plan to Evaluate Work Performance (Exhibit 12) of the Individual Phased Work Plan 1 (IPWP1)
- Example of Method to Randomly Select Two Percent Surface Area to Test (Exhibit 13 IPWP1)
- Rainier Commons Work Plan
- EPA December 18, 2013 Approval of Work Plan